



UNITED STATES PATENT AND TRADEMARK OFFICE

El

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,491	02/20/2004	Jack P. Shidemantle	650271-132	2161
27805	7590	05/20/2005		
THOMPSON HINE L.L.P. 2000 COURTHOUSE PLAZA , N.E. 10 WEST SECOND STREET DAYTON, OH 45402			EXAMINER JAGAN, MIRELLYS	
			ART UNIT 2859	PAPER NUMBER

DATE MAILED: 05/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/783,491

Applicant(s)

SHIDEMANTLE ET AL.

Examiner

Mirellys Jagan

Art Unit

2859

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 4, 6, 7, 11, 12, 14, 19, 23, 24, 26 and 29 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25 and 34 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 8-10, 13, 15-17 and 20-22 is/are rejected.
- 7) ☒ Claim(s) 18, 27, 28 and 30-33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/26/04 & 8/19/04
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Species C in the reply filed on 3/2/05 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Furthermore, in response to the restriction requirement, Applicant has amended claims 19, 26, and added new claim 29, to claim that there are two FETs, which is considered to correspond to Species B, as shown in figure 3 (see the last 2 lines of paragraph 18 in the specification).

Therefore, claims 4, 6, 7, 11, 12, 14, 19, 23, 24, 26, and 29 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim.

2. The election/restriction requirements stated in the last Office action, dated 1/26/05, is hereby repeated and thus made **FINAL**.

Claim Objections

3. Claims 8-10, 13, 15, 30, and 31 are objected to because of the following informalities:

In claim 8, there is lack of antecedent basis in the claim for "the temperature sensor" in line 2.

Art Unit: 2859

In claim 15, “is a means for providing a modified resistive output” should be deleted from line 2, and there is lack of antecedent basis in the claim for “the monitor” in lines 2-3 (the preamble claims an ‘interface’, but a ‘monitor’ is not positively claimed in base claim 8).

Claims 9, 10, 13, 30, and 31 are objected to for being dependent on an objected base claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 8-10, 15, and 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,629,336 to Ishizaka.

Ishizaka discloses a temperature probe comprising:

a temperature sensor (4) that provides a resistive output; and

a monitor interface (2) comprising:

a microprocessor (8/154) for determining a modified resistive output for the temperature sensor;

a means for providing the modified resistive output to a monitor (156) that can display a temperature that corresponds to the modified resistive output; and

an input to the microprocessor from the sensor; and

an output from the microprocessor;

Art Unit: 2859

wherein the microprocessor is programmed to execute a predictive algorithm; the modified resistive output corresponds to the predicted output; and a resistive output from the sensor is input into an A/D converter (5), and the output from the converter is fed to the microprocessor (see figures 1, 2, 8, and 9; column 15, line 10-column 16, line 36; and column 19, lines 15-49).

6. Claims 1-3, 8-10, and 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated by the prior art disclosed in U.S. Patent 5,876,122 to Eryurek.

Eryurek discloses a prior art temperature probe comprising:

a temperature sensor (RTD) that provides a resistive output; and

a monitor interface comprising:

a microprocessor for determining a modified resistive output for the temperature sensor;

a means (output circuit) for providing the modified resistive output to a monitor (instrumentation and control equipment); and

an input to the microprocessor from the sensor and an output from the microprocessor;

wherein the microprocessor is programmed to execute a correlative algorithm; the modified resistive output corresponds to the correlative output; and a resistive output from the sensor is input into an A/D converter, and the output from the converter is fed to the microprocessor (see column 1, lines 11-39).

Art Unit: 2859

7. Claims 1-3, 5, 8-10, 13, 16, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,576,487 to Conover, Jr. et al [hereinafter Conover].

Conover discloses a temperature probe comprising:

a temperature sensor (74) that provides a resistive output; and

a monitor interface comprising:

a microprocessor (246) for determining a modified resistive output for the temperature sensor;

a means (FET 278) for providing the modified resistive output in response to a signal from the processor; and

an input to the microprocessor from the sensor, and an output from the microprocessor;

wherein the microprocessor is programmed to execute a correlative algorithm; the microprocessor converts the resistive output of the temperature sensor to a modified resistive output that can be displayed by a monitor (252); the modified resistive output corresponds to the correlative output; and a resistive output from the sensor is input into an A/D (264) converter, and the output from the converter is fed to the microprocessor (246) (see figure 3; column 12, lines 5-39).

Allowable Subject Matter

8. Claims 25 and 34 are allowed.

Art Unit: 2859

9. Claims 18, 27, and 32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claims 30 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, and amended to overcome the objections set forth in this Office action.

11. Claims 28, 31, and 33 are allowable for being dependent on an allowable base claim.

12. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not disclose or suggest the following in combination with the remaining limitations of the claims:

A temperature probe, wherein the processor executes an algorithm that converts the resistive output to a modified resistive output representative of a predicted temperature during a condition of thermal stability (see claim 18); or wherein the FET provides an FET resistance corresponding to the modified resistive output (see claim 32).

A temperature probe, wherein the FET provides an FET resistance corresponding to the modified resistive output (see claim 27).

A monitor interface for a temperature probe, wherein the FET provides an FET resistance corresponding to the modified resistive output (see claim 30).

13. The following is an examiner's statement of reasons for allowance:

The prior art of record does not disclose or suggest the following in combination with the remaining limitations of the claims:

A method for digitally modifying the resistive output of a temperature sensor, comprising the step of controlling a gate of an FET to adopt a setting corresponding to the modified resistive output and outputting a resistance corresponding to the modified resistive output (see claim 25).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents and publication disclose a temperature sensor having a compensated output:

U.S. Patent Application Publication 2004/0252750 to Gruszecki et al

U.S. Patent 4,481,596 to Townzen

U.S. Patent 5,857,777 to Schuh

U.S. Patent 5,473,629 to Muramoto

U.S. Patent 6,839,651 to Lantz et al

U.S. Patent 4,122,719 to Carlson et al

U.S. Patent 6,439,768 to Wu et al

U.S. Patent 3,872,726 to Kauffeld et al

Art Unit: 2859

Japanese Patent 58178234 to Yamaguchi

The following patent discloses a temperature sensing circuit:

Japanese Patent 56027625 to Kondo

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mirellys Jagan whose telephone number is 571-272-2247. The examiner can normally be reached on Monday-Friday from 11AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJ
May 17, 2005


GAIL VERBITSKY
PRIMARY EXAMINER